The CACAO of the WORLD

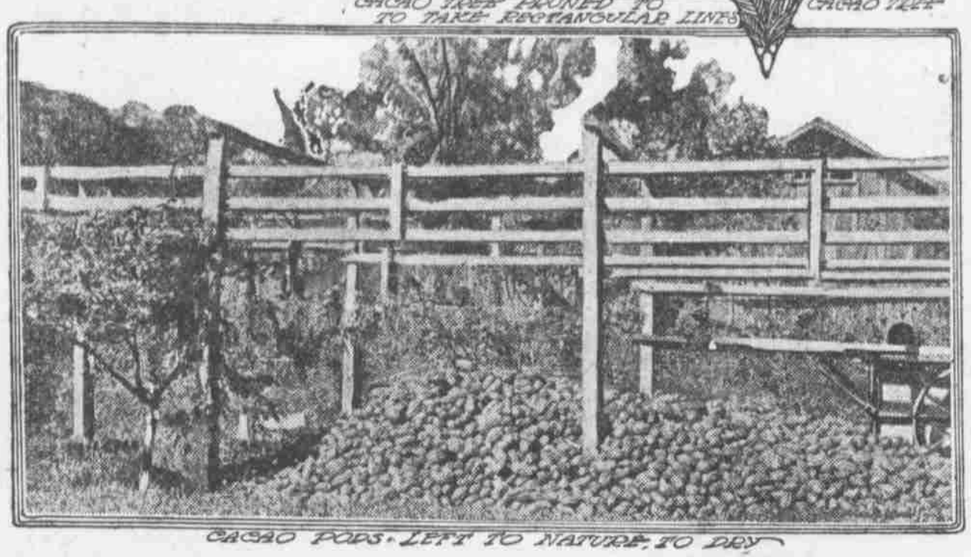
CACAO can profitably be grown on only a small area of the earth's surface. The limit is 20 degrees, both north and south of the Equator, but water takes up a large share of this narrow belt, leaving merely a slice out of America and of Africa, with the near-by islands, for consideration. Practically one-half of the year's crop comes from seven republics of Latin America; adding to this the amount grown in the dependent countries of America, it is evident that the Western Hemisphere produces every year the larger part of the world's supply. The list is again headed by those friendly rivals, Brazil and Ecuador, on opposite sides of the continent, but both south of the Equator; they always contribute a generous proportion of the annual crop, and lead or follow one another closely, with commendable perseverance through the decades. Among the American republics, third place in 1911 must be yielded to the Dominican republic, although Venezuela usually holds it.

Thome, San (or Sao in Portuguese) Thome, according to some atlases and geographies, is not to be confused with St. Thomas, in the West Indies; it is a small island belonging to Portugal, and lies only 166 miles from the African coast. The area is but 400 square miles, yet the cacao production is enormous, and Thome cacao sometimes sets the pace and price in the markets. Africa, it would seem, has risen rapidly in importance since the beginning of the twentieth century, for the Gold Coast, the Cameroon (Kamerun), and Fernando Po have since that time become producers. Fernando Po, by the way, is another small island, of only 780 square miles, not far from Africa. It was once Portuguese, but is now Spanish.

ARTIFICIAL POLLINATION OF CACAO FLOWER

CACAO TREE PRUNED TO TAKE RECTANGULAR LINES

TRUNK OF A CACAO TREE



CACAO PODS LEFT TO NATURE TO DRY

The British possessions have become remarkable producers of cacao in recent years. In the West Indies they include Trinidad, Jamaica, Grenada, St. Lucia and Dominica; in Africa the Gold Coast and Lagos, while in the far east is Ceylon, which seems to specialize in crops that appeal to the unalcoholic tastes of the modern.

The principal constituents of the cacao bean are: (1) alkaloids; (2) starch and sugars; (3) albuminous matters; (4) cacao butter, together with various mineral substances. The alkaloids are complex organic substances which are responsible for the stimulant effects of cacao; caffeine is one of them, but appears in lesser amount than in coffee or tea, and there is a variable quantity of theobromine, which is not very unlike caffeine; starch is present in the proportion of about 7 to 10 per cent, while real sugar (glucose), at least in the bean itself, shows only about one-half of 1 per cent, although the starch may be converted as preparation of cacao advances; albuminous matters about 8 to 12 per cent; fats, of which cacao butter is the essential, from 45 to something over 50 per cent; the mineral substances are phosphoric acid, potash and magnesia. Other analyses may be found or made, yet for practical purposes this statement is accurate enough. There is a delicate substance called "cacao red," which is a coloring matter, and this, with theobromine, is said to give to cacao its characteristic taste.

Such proportions of nutrient ingredients are by no means a perfect food. It may be shown that 100 parts of cacao nibs contain heat givers equivalent to 132 parts of starch, while the flesh formers present amount to about 17 parts; or in other terms, one pound of cacao nibs is more than equal in flesh-forming constituents to 1 pound of lean mutton chop, but a pound of cacao nibs can not be eaten or drunk at one time—it would be quite indigestible—so that no argument can be based upon its theoretic food value. The amount of cacao butter, however important in itself, is also of little service in this connection, although it has other and much higher values in commerce; it would therefore be wasted if reserved for food alone.

The great advantage cacao has over similar substances, where also experience fails to support theory, is the fact that, in the form of chocolate, where the fats are retained, the palatability and assimilability of sugar mixed with it are very much enhanced. Not so many years ago the drink called chocolate was thought to be a reckless dissipation for one who had no regard for his or her stomach. To indulge in chocolate candy was quite as pernicious as to eat tomatoes, and with quite as much reason. Tomatoes were once declared a poison, but today they are considered a very wholesome vegetable. Chocolate was once an exotic and bizarre drink, told about by travelers who had ventured into Mexico or Spain, but today it is even ordered in the sick room, and, at least in the form of cacao from which the fats have largely been removed it is considered both digestible and nourishing. Candies and pastry with chocolate were practicaly taboo to well-brought-up children, and the adult who indulged in such toothsome morsels was ridiculed as a backslider from the lusty diet of red meat and potatoes, on which his pioneering ancestors had grown strong.

What a difference the scientific study of dietetics has brought about. Sugar—that is, carbohydrates—is now acknowledged to be a normal part of human food; in certain circumstances a necessary part of it, and any way to get sugar into the system so that it will be agreeably assimilated is to help nature to accomplish her proper ends. The carbohydrates are the accessory ingredients supplying energy to the body above that which may be obtained from the proteids. The harder the physical work an individual performs the more proteid must he eat, and up to a certain point the less sugar does he require; but in ordinary life the individual requires a dietetic mixture of proteids, fats, and sweets, while under conditions in which muscular tissue has been rapidly exhausted sugar has the faculty of restoring energy quickly, and therefore of making the heavier foods accomplish better results. The starchy foods like potatoes are useful in all dietaries, but when immediate results are sought, sugar must be used.

Sugar is all right in itself, and commercial statistics show that abundance of it is grown and consumed. Yet plain sugar in a dietary will not invariably be acceptable to the human animal; he must have his taste as well as his logic satisfied, and nothing makes sugar so agreeable as a due proportion of chocolate added. Ask any child what kind of candy he likes best, and the almost invariable reply will be "chocolate candy;" ask an adult what kind of cake he prefers, and with a somewhat ashamed remembrance of youthful days, when to indulge in cake was a seldom permitted but frequently clandestine luxury, the answer is "chocolate cake." The schoolgirl makes "fudge" as a proud and self-popularizing accomplishment; the soda-water fountain would go into bankruptcy if the chocolate sundae were withdrawn from the list of attractions, and a chocolate eclaire would be a common cream puff if the brown layer were scraped off the top. Chocolate candy is in some cases one of the first of solid foods offered (of course only under the physician's orders) to the convalescent from typhoid fever; and some armies supply the men in the field after a severe march, or those exposed to the exhaustion of the tropics, with chocolate candy, by no means for the sole reason that it will if only for the time being overcome their homesickness, but for the very dignified purpose of meeting their dietetic wants by introducing sugar mixed with chocolate into their systems.

In Central America and Mexico the breakfast food of the inhabitants from prehistoric times has been a preparation of Indian corn with the produce of the cacao tree; this is made into a porridge called 'tiste," which is agreeable to the taste and nourishing, for a long journey can be made upon it. In some factories it is admitted that 60 per cent of their chocolate is composed of sugar, and that they really sell sugar flavored with chocolate instead of chocolate flavored with sugar; the sweeter the article the better it is liked, although the purchaser is paying two prices for his sugar and is not getting what he asked for. He is buying what he wanted, nevertheless, a sweet chocolate, and the rule is thus proved that the cacao product is one of the best known associates of sugar.

As an inhabitant of the polar regions craves a fat of some kind, and as another in the tropics enjoys his fruits and his hot peppers—both nature hints in regard to diet—so the inhabitant in the temperate zone consumes sugar and is unharmed thereby, providing that there is no overindulgence. That explains why so much sugar is carried from the tropics to the north; it is a food necessity. It explains also why the manufacturers of cacao and the chief consumers are in the countries where no production is carried on. Proximity to the consumers is a recognized rule in manufacturing.

The United States heads the table of cacao users, for the people number the most, but in proportion to population this country takes no more than its share. Germany, France and England consume annually considerable quantities of cacao, but Holland and Switzerland use an amount far in excess of their inhabitants.

Figured out in pounds per capita, the importation of cacao, for it amounts to that, is quite striking. The United States uses about one and one-half pounds of cacao each year for each inhabitant; Germany about three and two-thirds pounds; France, a little over one and one-half pounds; England, about one and one-fifth pounds; Holland, almost nine pounds; Switzerland, a little over five pounds; and Spain not quite six-tenths of a pound. Much of these quantities go into the preparation of cacaos and chocolates to be used for beverages, but an ever-increasing total is manufactured directly into sweets, dulces, and bonbons, thus distinguished according to the nationality of the people, or what is called candy in the United States. The United States imports quantities of cacao, chocolate and confectionery from European countries, and itself exports quantitiess abroad, its markets including every country in America, even those in which cacao growing for export is an established industry.

It may be prophesied that the time is coming when the supply of cacao will not equal the demand. While there are untouched areas in Latin America, in Africa and the East Indies, yet this area is rather sharply defined and by nature limited. It is not so extensive as might be guessed by merely looking at the map, for the climatic factors of temperature and humidity must be favorable, or else the tree will not bear for commercial profit, although within a few miles of successful plantations. Probably America has larger resources of virgin land than the rest of the earth, and will always hold the lead in production. This should surely be the case if improved methods of cultivation and transportation increase the yield and the profit from the crop.

The area for cacao production, as has been stated, is limited, while population is growing at a rapid rate, and in addition the value of cacao is becoming recognized with greater clearness each year. As is the case, therefore, with other great staples of the world—for cacao must now be considered an agricultural staple—like meat, wheat, corn and cotton, the price is slowly rising as a larger food supply must be gathered for the world's needs. By the middle of the century the result may be expected that the supply will be as proportionately meager in relation to population as it at present appears to be ample.

Existence on a cacao plantation can be healthful and pleasant; it is a tropical life, but the surroundings may be made thoroughly agreeable, and the reward can surely equal the amount of energy expended.

Much scientific study has of late years been given to the botanical characteristics of the cacao tree, the methods of propagating it, its diseases, and the best manner of shipping and marketing the crop. Since the success of the valorization control of coffee in Brazil, plans have been proposed to valorize in Brazil, and Ecuador also, so as to prevent violent fluctuations in price and to give growers some sense of security concerning values. The outcome of the plans can, however, be of only temporary commercial significance. The essential status of cacao in the world's food supply is bound to become progressively more important.

KINDLY MEANT

Mrs. Jenkins—Mrs. Smith, we shall be neighbors now. I have bought a house next you, with a water frontage.

Mrs. Smith—So glad! I hope you will drop in some time.—Everybody's Magazine.

AS TO AFFINITIES.

"Do you believe that for every man in the world there is a certain woman who is his real affinity?"

"No. There are some men who would never consent to be henpecked by anybody."

WARY OLD BLACKSNAKE

GAVE NATURALIST A MERRY TIME BEFORE ITS CAPTURE.

Every Device, From Flight to Open Defiance Resorted To—Finally Shaken From Tree Top It Continues Resistance.

A naturalist in Virginia encountered a desirable specimen of blacksnake which he wanted for his collection. As usual in such cases the snake saw him first. It lay perfectly quiet, trusting to escape observation.

Directly in front of the naturalist lay a wide open space. The naturalist knew that he could easily overtake the blacksnake before it could reach the bushes opposite. The blacksnake, too, seemed to be cognizant of this fact, inasmuch as the man had not taken half a dozen steps in its direction before it changed its tactics and, some ten feet away, turned and charged its hunter.

The man spread his legs and stooped to catch the snake. But the blacksnake displayed such agility that before the hunter could determine just where to grasp it the snake was ten feet away.

It was evident that the blacksnake expected the man to flee, as no doubt it had seen other men flee under such circumstances. The snake was some seven feet in length and although quite harmless looked formidable enough to frighten the average man.

As its hunter did not flee the snake turned about and again charged. This time it swerved from its course when it saw that the man was standing his ground. This deviation in the snake's rush got it into some bushes. Here it coiled after the manner of a rattlesnake.

It elevated its tail and vibrated it with great rapidity and, striking the leaves and twigs, managed to produce a buzzing sound not unlike the warning of a rattler. At the same time it drew back its head as if ready to strike.

The man continued to advance; so the snake once more changed its tactics. It began to doge in and out of the bush. The maneuvering continued for perhaps ten minutes. Then the man, seeing a good opportunity, rushed forward to secure his prize.

The blacksnake mounted through the bushes to their tops and went from the tops to the lower branches of a small birch. It continued to mount upward and made its way to the swaying tip, some 15 feet in the air, performing the feat as quickly as a squirrel could have done it.

From this elevated position the blacksnake surveyed the man in triumph. But its exultation was short lived, for a vigorous shake of the tree brought it down, and as it fell upon the soft bed of leaves at the hunter's feet the man threw himself upon the serpent and succeeded in catching it.

Even then the blacksnake did not lose its head, but by an unexpected movement managed to fasten one of its teeth in a finger, inflicting deep scratches.

The naturalist kept this snake for nearly two months. It proved to be the most intractable of blacksnakes. Whenever the naturalist took it in his hands it would exhibit much ingenuity in its attempts to escape.

Country Weekers.

Mayor Crump of Memphis in a recent address on behalf of children's country week associations said:

"Astonishing is the ignorance of nature shown by these little pale, lean slum dwellers. One child, whose knowledge of trees and grass and flowers was derived from the early closing city parks, said as she gazed with delight on a green rural scene:

"'What time does the country shut up?'

"Another child watched a farmhand digging potatoes and said:

"'Is this where you keep your potatoes, sir? I should think it would be handier to keep them in bags in the cellar.'

"And I know of a third child to whom a farmer offered a superb, ripe peach.

"'Let me pluck this peach for you right off the tree,' he said.

"But the child, a little girl, turned up her nose and answered loftily:

"'No, thank you. I never eat them till they're canned.'"—Exchange.

Commercial Politics.

Commerce forms a numerous class, friends of external peace and internal tranquillity, who attach themselves to the established government.

It creates great fortunes, which in republics become the origin of the most forceful aristocracies. As a rule commerce enriches the cities and their inhabitants, and increases the laboring and mechanical classes, in opening more opportunities for the acquirement of riches. To an extent it fortifies the Democratic element in giving the people of the cities greater influence in the government. It arrives at nearly the same result by impoverishing the peasant and land owner, by the many new pleasures offered him and by displaying to him the ostentation and voluptuousness of luxury and ease. It tends to create bands of mercenaries rather than those capable of worthy personal service. It introduces into the nation luxury, ease and avarice at the same time as labor.—Barnave.

Measuring Touch Sense.

A remarkable instrument has been invented for the purpose of measuring the sense of touch. This device consists of a series of little disks, each three millimeters in diameter, suspended by fine, delicate thread from wooden handles, the last being stuck into holes round a block. The lightest disk is taken out and brought into contact with the skin and the subject, he having his eyes closed. If nothing is felt, a heavier disk is employed, and so on until the pressure becomes noticeable. The disks weigh from one to twenty milligrams, and with their aid it has been proved that the sense of touch in the average person is conveyed by two milligrams on the forehead, temple and back of the forearm, five for the nose and chin, and 15 for the inner surface of the fingers.

THE BOUDOIR

Dame Fashion's Diary

WIDE CHOICE IN COLOR

BRIGHTEST TINTS ARE POPULAR THIS SEASON.

Especially Is the Younger Generation Favored in This Respect—Beautiful Shades of Satin for the Light Cloaks.

The girl of eighteen is a very lucky individual this season. She has a range of colors from which to choose her summer attire, amongst which the most enchanting tints that are copies of flowers and fruit may be secured.

Prominent in every way is a rich, full pink, the pink of olden days, called sometimes peony and sometimes hollyhock. Frocks made all of pink mousseline blush vividly, and would be truly trying possessions for anyone except the quite youthful wearer.

Every shade of azalea is greatly liked. It is a beautiful color, rich withal dainty, and a very good choice for the mother as well as the daughter. The pale amber tint flushed with pink is the young wearer's choice, and the more distinct golden shade of the flower that of the dowager.

In satin it is a specially beautiful dye capable of making a most desirable cloak with a softly falling collar of Mechlin lace. Such a cloak would be lined with blue and rose, and the glint of the background, just perceptible through the other material, would add to the elusive and picturesque effect of the wrap.

There must be a hint of romance in the new cloaks if they are to be a la mode. Without obviously copying the Spaniard's cloak, the Scotsman's plaid or the Irish colleen's all-enveloping cape, the fashionable models just suggest them.

It is difficult to produce the complete charm of the folded draperies unless the aid of an expert be called in. Some of the new models owe their allurement to a long and flopping overcape, which falls upon the shoulders back and front, and is eccentrically cut across one corner, and perchance weighted by a tassel. Others have the finish of huge hood, formed with very little precision, but recognizable as a hood of large dimensions.

Olive leaf is a new color for the cloak, a dull and exquisite green with a tint of gray in it, which, with a little platinum embroidery designed to support the draperies, is a choice at once quiet and handsome—an alliance of charms much in request.

Other frankly vivid colors borrowed from flowers and fruit are apple green and hawthorn rose, and we have framboise, a rich red, which is very useful side by side with black or biscuit, and a particularly lovely azure called love in a mist.

Such colors when softened by the juxtaposition of, say, biscuit linen, embroidered in relief with cotton of the same shade, or with the ever useful touch of black, will make the summer months radiant, indeed.

The Ideal Bedroom.

The bedroom is what its name implies, a place of repose, and everything about it should be conducive to the one purpose of obtaining rest. Everything in it should be simple, immaculate, and easily kept so. The floors of such rooms should be covered with matting or should be oiled and rugs placed beside the bed. The paper on the walls should be quiet and subdued. If, to make the windows uniform with those in other rooms in the house, curtains are necessary, they should be as simple as possible. Garish furniture, and articles not absolutely necessary to the occupant should have no place there. Above everything the bedroom should be flooded with sunshine for at least on hour in the day and an abundance of fresh air admitted at all times.

Cool and Neat.

Not every woman appreciates the qualities of pure white percale. This fabric is much used by trained nurses, for lightweight uniforms which may be laundered to spic and spanness with much less labor than linen requires. Percale is also cooler than linen and is much lighter in weight. For beach dresses for morning wear it is a specially satisfactory fabric and may be trimmed with stitching and buttons in smart style. A young woman who always looks as though she had stepped out of a bandbox wears nothing but white percale frocks in summer time. A loose blouse with tan open collar is trimly belted above the short, straight skirt, and buttoned boots of white buck complete the costume.

Some girls who like to have a faint perfume clinging about the hair put an oblong of folded wadding, with powdered orris root scattered between, in a linen slip. This they lay on top of the ordinary pillow at night.

FOR GIRL OF 10 TO 12

Printed cotton delaine in a pretty shade of pink is used for this little dress.

The bodice has one wide tuck over each shoulder and the sleeves are set into the armholes, the tucks standing out over them.

The skirt is arranged in two tucks each side both front and back; it joins the bodice band, which, with the neck and sleeves, is trimmed with embroidery insertion.

Materials required: 3½ yards 28 inches wdie, 2 yards insertion.

SLEEPER GOWN

Copyright, Underwood & Underwood, N. Y.

It takes the French to make up the long wished for gown for the "Sleeper." This new gown is of Lansdowne, buttoning in front, adjusted to the waist by an elastic. The belt is run through the bag and carries the brush, comb and necessary toilet articles to take to the dressing room.

ABOUT THE PLAITED SKIRT

Soft Satin Is Perhaps the Best Material of Which This Popular Garment Can Be Made.

Then there is a type of plaited skirt which I have seen in soft satin, a material that takes the plaiting process very successfully. This was in a bright, deep shade of blue, and the plaits were all caught in at the foot beneath a broad band of black taffeta which was considerably under two yards in circumference. In a dress of this shape the difficulty is to prevent all those plaits from ballooning up and out as the wearer moves or sits about, and it would be imperatively necessary to make free use of shot all round the bottom.

This is the dark side of the shield of fashion—shot being singularly disagreeable to a walker, as they strike against the ankles at every step. However, pride must bear pain, and those who like the plaited skirt must put up with these little drawbacks. The tailors also are using plaits, though more sparingly. They are turning out a skirt that has a tablier back and front with two deep plaits on either side, and there is another that has a group of flat wide plaits at the back only, starting from about the height of the knees; so you see, if you want to return to the wide skirt, there is nothing to prevent you; the mode of the moment permits every vagary. —Baltimore American.

Desk Set DeLuxe.

Ordinary desk sets of leather and brass, and the dainty silver and cut-glass sets, are eclipsed by a new set brought out by a new York firm, and for which bit of writing table luxury one may pay the best part of a hundred dollar bill. There is a large writing pad with pearl corners overlaid with brass filagree, a letter-opener of brass with a pearl handle, a brass inkwell with pearl trimmings and top, a brass pen tray, letter rack and blotter and dainty pearl calendar and photograph frame.

"That orator has such liquid tones."

"I suppose that is why the crowds drink them in so."

Writer Turns the Tables

Neat "Take-Off" on Stereotyped Manuscript Rejection Sent to Magazine Editor's Desk.

Magazines ordinarily return manuscripts with polite printed slips. Below is produced a good "take-off" on one of these slips. It was sent by an author with his manuscript when he dispatched it to The American Magazine. The man who wrote the letter and sent it with his manuscript is Charles F. Lummis, public librarian in Los Angeles, Cal.:

"Do you know good verse when you see it?

"The author regrets that this MS. is not compulsory. It is merely an opportunity.

"You publish so much literature that it is quite impossible for him to criticize it personally and show you how much better this is. Except at full rates—and worth the money.

"The obvious merit of this contribution does not necessarily imply any lack of intelligence in the editors who reject it. Quite the contrary. They have to maintain their average. Nothing is more experimental than variety.

"Homing envelope, with wings prepaid, with this, just as though it were an ordinary MS."

Virtue is its own reward, so it isn't necessary to advertise it.

Chapel in Coal Mine.

In the Mynydd Newydd colliery, at Swansea, South Wales, at a depth of 750 feet below the surface, is a notable chapel. It is claimed to be the only such chapel especially prepared and consecrated for worship. It is a long, low room, fitted with rough wooden benches, capable of accommodating between 150 and 200 men. Services are held before work every Monday morning in the Mynydd Newydd colliery, and have been held regularly since 1867.